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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,859	02/23/2004	Daniel J. Griffin	10030956-1	9415
57299	7590	12/15/2006	EXAMINER	
AVAGO TECHNOLOGIES, LTD. P.O. BOX 1920 DENVER, CO 80201-1920			WANG, ALBERT C	
			ART UNIT	PAPER NUMBER
			2115	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding:

Office Action Summary	Application No.	Applicant(s)
	10/784,859	GRIFFIN
	Examiner Albert Wang	Art Unit 2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 February 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Original claims 1-22 are pending.

Claim Objections

2. Claim 17 is objected to because of the following informalities: “not proving” is interpreted as “not providing”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Simmons et al., U.S. Patent No. Re. 36,839 (“Simmons”).

As per claim 1, Simmons teaches a system comprising:

a clock control module (fig. 1, clock control 16);

a first functional unit (e.g. functional block 12a); and

a second functional unit (e.g. functional block 12b);

wherein the clock control module is configured to provide a first clock signal having a first frequency to the first functional unit in response to receiving a start signal (e.g. clock on line 18a in response to data), wherein the clock control module is configured to provide the first clock signal to the second functional unit in response to receiving a first control signal from the first functional unit (e.g. clock on line 18b in response to cc on line 20a), and wherein the clock control module is configured to stop providing the first clock signal to the first functional unit in

response to receiving the first control signal from the first functional unit (col. 4, lines 34-54; col. 5, lines 18-28; col. 9, lines 8-15).

As per claim 2, Simmons teaches further:

a third functional unit (e.g. functional block 12c);
wherein the clock control module is configured to provide the first clock signal to the third functional unit in response to receiving a second control signal from the second functional unit, and wherein the clock control module is configured to stop providing the first clock signal to the second functional unit in response to receiving the second control signal from the second functional unit (col. 4, lines 34-54; col. 5, lines 18-28; col. 9, lines 8-15).

As per claim 4, Simmons teaches wherein the clock control module is configured to stop providing the first clock signal to the second functional unit in response to receiving a second control signal from the second functional unit (col. 8, lines 43-54).

As per claim 6, Simmons teaches further: a first clock configured to provide the first clock signal; and a second clock configured to provide the second clock signal (col. 3, lines 53-65).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 5 and 7-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simmons et al., U.S. Patent No. Re. 36,839 ("Simmons"), in view of Knee et al., U.S. Patent No. 6,963,060 ("Knee").

As per claim 8, Simmons teaches a system comprising:

a clock control module (fig. 1, clock control 16);

a first functional unit (e.g. functional block 12a);

a second functional unit (e.g. functional block 12b);

a third functional unit (e.g. functional block 12c);

wherein the clock control module is configured to provide a first clock signal having a first frequency to the first functional unit in response to receiving a start signal (e.g. clock on line 18a in response to data), wherein the clock control module is configured to provide the first clock signal to the second functional unit in response to receiving a first control signal from the first functional unit (e.g. clock on line 18b in response to cc on line 20a), and wherein the clock control module is configured to stop providing the first clock signal to the first functional unit in response to receiving the first control signal from the first functional unit (col. 4, lines 34-54; col. 5, lines 18-28; col. 9, lines 8-15).

Simmons teaches power-saving means for generic functional units (col. 3, lines 45-52), but does not expressly teach the functional units as being part of a pipeline in an optical mouse. Knee teaches an optical mouse with a photo array, analog-to-digital converter, and processor arranged in a pipeline fashion (fig. 1, photo-sensor array, ADC 9, and DSP 10; col. 12, lines 20-34). At the time of the invention, it would have been obvious to one of ordinary skill in the art,

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that Simmons' power-saving means are applicable to optical mice, especially ones that powered by a battery.

As per claims 3, 5, 7, 9, 10 and 13, a slower second frequency is commonly used in a sleep or suspend mode.

As per claims 11, 12 and 14, Knee teaches other functional units such as a navigation circuit (col. 2, lines 26-37).

As per claims 15-19, since Simmons/Knee teaches the system of claims 1-14, Simmons/Knee teaches the claimed method.

As per claims 20-22, since Knee inherently discloses a wireless transceiver (col. 12, lines 20-34), Simmons/Knee teaches the system of claims 1-14, Simmons/Knee teaches the claimed mouse.

Conclusion

Examiner's note:

Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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CHUN CAO
PRIMARY EXAMINER